

GP-303840

## PLATED GRINDING WHEEL LIFE MAXIMIZATION METHOD

## ABSTRACT OF THE DISCLOSURE

A method of determining the condition of a grinding wheel is provided to avoid over use or premature changing of the grinding wheel in a grinding machine, such as for crankshaft or camshaft grinding. The grinding machine has a motor which drives a grinding spindle carrying an abrasive coated hub acting as a grinding wheel. Sensors detect the level of grinding force and motor torque required to grind a workpiece into a desired shape. The information is relayed to a controller, which averages and compares the grinding force and torque information to force and torque limits to determine the condition of the wheel. In addition, the controller compares grinding force and motor torque over a series of grinds to determine the level of increase between grinds to further determine the condition of the grinding wheel. If the level of increase exceeds an increase limit, the controller actuates a fault signal to stop the grinding machine indicating that the wheel is near the end of its life cycle.